



**Common Market for Eastern and Southern Africa
Comprehensive African Agriculture Development Programme**

Modern, Mobile and Profitable: Assessing the Total Economic Value of Pastoralism



**POLICY BRIEF Number 13
February 2010**

*In the new book **Modern and Mobile: The Future of Livestock Production in Africa's Drylands**, COMESA explains that pastoralists contribute significantly to domestic and export livestock markets. Cross-border trade in pastoralist areas is critical to regional economies as well as the national economies of different countries. However, pastoralism in the region is still very much misunderstood in terms of the economic benefits which it currently generates, and the potential for growth. In marked contrast to the available evidence on the economics of pastoralism are widely-held beliefs that pastoralism is an archaic, economically inefficient, chaotic and environmentally destructive form of land use. Although such views are not evidence-based, they continue to drive national livestock and land policy in many countries in the COMESA region.*

Where there is no data?

Existing national statistics are inadequate and inaccurate, and fail to record the full economic contribution of pastoralism in the COMESA region. Direct values of pastoralism include the production of milk, meat and hides for family consumption and domestic and export markets,

but these are poorly captured in the national accounts, even when as inputs to the formal sector. Indirect values of pastoralism include contributions to other formal economic sectors (e.g. tourism, agriculture) and sustainable land use and risk management in disequilibrium environments and a range of other environmental services (e.g. biodiversity conservation, carbon sequestration). But these too are rarely portrayed in national statistics or recognized by policy makers. Consequently, governments undervalue pastoralism and promote policies that in seeking to change or replace it create a vicious circle of impoverishment, conflict and environmental degradation.

Undervaluing pastoralism

Governments collect data on livestock numbers and certain indicators of productivity (milk and meat production) and export values of live animals, hides and skins and to a lesser extent milk. These contributions are subsequently expressed in terms of their contribution to agricultural GDP. And while existing national statistics indicate livestock contributing a significant amount to the COMESA region's agricultural GDP – 80% in Sudan, 50% in Kenya,

35% in Ethiopia – these figures undervalue the true contribution of pastoralism to the economy.

National databases are limited in a number of ways.

- A significant but unknown proportion of the pastoral economy does not pass through official markets but occurs within the community and through unofficial trade, including cross-border commerce. Only 10% of interregional trade from five border areas in East Africa, valued at US\$ 61 million per year, actually passes through official trade channels and is recorded. Furthermore, the total national value of milk and meat consumed within the pastoral family and the labour supplied for managing livestock are unknown.
- In practice, statistical compilations tend to be based on assumptions, estimates and best guesses by a range of people. Data collection also fails to distinguish gender or capture the economic contribution of women pastoralists through dairying, provision of labour and collection of non-timber forest products. Data that is collected tends to focus on the livestock sector, ignoring the economic contribution of other key resources within pastoralism (e.g. non-timber forest products). Furthermore, not only does the data fail to distinguish between the relative contributions of different livestock production systems (e.g. ranching, dairying, pastoralism), statistics are largely collected on cattle with little information available to demonstrate the economic outputs of sheep, goats and camels, key resources in many pastoral economies and a major source of trade both within and outwith the region. Information on the contribution of donkeys is virtually non-existent.

A new conceptual framework

A new conceptual framework is required to capture properly the true national value of the goods and services from an informal sector like pastoralism. To do this, the concept of pastoralism's economic benefits has to be extended beyond the value of livestock products (milk, meat, hides) to include all "values" associated with it. These values also need to be disaggregated within pastoral systems and households and between them and the broader national economy.

The **Total Economic Value (TEV)** framework is such a tool, providing a more complete picture of the impact and value of pastoralism. Table 2 uses the TEV approach to identify the range of direct and indirect values that can be attributed to pastoralism, as a first step in exploring its total value.

Direct values include the consumption of livestock products (milk, meat, blood) and forest goods essential for the well-being of the family. Livestock provide financial services – investment and insurance – to rural communities without easy access to formal banking facilities, and currency to build social capital so essential in high-risk environments where access to key resources is highly dependent on social relations.

Other direct values include the value of the goods sold on informal and formal markets and the inputs pastoralism makes to the supply chains of other formal and informal sectors, including the *nyama choma* or roast meat trade in East Africa. A 2005 study in Arusha, Tanzania, identified over 600 *nyama choma* businesses employing 5,600 people with an estimated 25,000 dependents. When ancillary businesses such as butchers' outlets are included, the annual turnover of the

Table 1: Total Economic Value (TEV) framework

Direct values	Indirect values
<p>Subsistence and livelihood values:</p> <ul style="list-style-type: none"> • Production for household and community consumption; includes flows of livestock products such as milk, meat and blood, and forest products such as firewood, honey, fruits, medicine; also include breeding and stock accumulation. • Service provision: insurance, savings and risk management. • Other factors: socio-cultural values and maintain important social relations and social capital, including for peace. <p>Economic values:</p> <ul style="list-style-type: none"> • Marketed: domestic, regional and export sales of milk and milk products, meat and live animals, hides and leather, and non-timber forest products. • Raw material production: inputs to supply chains involving informal or quasi-formal economic activity – butchers, traders, and transporters. <p>Human capital values:</p> <ul style="list-style-type: none"> • Employment of 9 to 20 million East Africans • Skill development and indigenous knowledge 	<p>Economic input values:</p> <ul style="list-style-type: none"> • Added value to agricultural production • Benefits to tourists and the tourism industry <p>Environmental values:</p> <ul style="list-style-type: none"> • Nutrient recycling • Maintenance of pasture productivity and biodiversity • Tree regeneration • Maintenance of natural ponds and water cycling • Building environmental resilience to climate change • Carbon storage

industry in Arusha is now estimated at US\$ 22 million. The direct value of pastoralism as an 'employer' is often overlooked. In the drylands areas of the COMESA region, pastoralism is often the only form of employment. Estimates of the pastoralist population vary from 9 to 20 million, and with potential part-time involvement could be considerably higher. And is not just the numbers that are important. Pastoralists are highly specialised livestock herders and breeders and have skills and indigenous knowledge of direct national value. Pastoralists also possess a sophisticated understanding of livestock genetic selection processes. As climate change brings greater environmental, social and economic uncertainty, harnessing pastoral knowledge and experience on livestock management in an environmentally sustainable manner will prove invaluable in the overall management of Africa's drylands.

Pastoralism contributes significant but unknown value indirectly to other sectors and industries – **indirect values**. Agriculture is a key beneficiary of pastoralism. It helps raise agricultural productivity by providing manure, animals for agriculture and transport, seasonal labour, and technical knowledge for the rising number of farmers now investing in livestock. Farmers also help pastoralists by providing crop residues as fodder – potentially crucial in drought years. These reciprocal exchanges help reduce conflict and promote peaceful relations.

Unlike agriculture, pastoralism is one of the few land uses able to coexist with wildlife, as

domesticated and wild animals exploit different ecological niches. As such, pastoralism is a major contributor to tourism, particularly in eastern Africa. A vital input is the maintenance of grazing reserves, which provides critical dry season habitats for wildlife. Nelson (2009) estimates the protection of dry season grazing contributes US\$ 8m million to Tanzania's northern circuit tourism industry. The carbon storage potential of the rangelands is increasingly recognized. The rangelands are the largest land-use system in the world, covering about 40% of the earth's land mass and 60% of Africa. It is estimated that these habitats store approximately 30% of the world's carbon stocks. Pastoralism, while generating economic benefits from these areas through the temporary grazing of livestock, also plays a significant role in ensuring the stored carbon is not released, as would be the case with alternative land-use systems (e.g. farming, bio-fuel production).

The way forward

Globally, livestock is growing faster than any other agricultural sector; and in COMESA region, the demand for meat and related products is rising along with urban populations. To meet that demand, contribute to economic development and boost foreign exchange, the region's governments are focusing on both regional and international trade. Pastoralism, properly valued using a TEV framework backed by a supportive policy environment will contribute significantly to meeting both domestic and regional demand.

Further reading

- Little, P. (2009). Hidden value on the hoof: cross-border livestock trade in Eastern Africa. Policy Brief 2, COMESA, February 2009
- Letara, J. (2006). *The economics of the Nyama choma business in the city of Arusha, Tanzania*. RECONCILE/IIED.
- IIED/SOS Sahel (2009). *Modern and Mobile: The Future of Livestock Production in Africa's Drylands*.
- Nelson, F. (2009). Natural Conservationists? Evaluating the Impact of Pastoralist Land Use Practices on Tanzania's Wildlife Economy. IIED and TNRF, in press
- Tennigkeit, T and Wilkes, A. (2008). Carbon Finance in Rangelands. ICRAF/UNFCCC Challenges and opportunities for mitigation in the agricultural sector. Technical paper.

Acknowledgements

This thirteenth COMESA Policy Brief was prepared by Ced Hesse support provided by the International Institute for Environment and Development to the *Pastoral Areas Coordination, Analysis and Policy Support (PACAPS)* project. PACAPS is a project of the Feinstein International Center, Tufts University, implemented in partnership with COMESA. It is funded by the United States Agency for International Development as part of the wider program "*Regional Enhanced Livelihoods in Pastoral Areas (RELPA)*".

Further information

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